

GenCore version 4.5  
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## OM protein - protein search, using sw model

Run on: May 23, 2001, 14:18:15 ; Search time 18.6 Seconds

(without alignments)  
1625.704 Million cell updates/sec

Title: US-08-883-036a-2

Sequence: 1 MEDRGQNAFASGARRKRRHP.....HLSSGKFKYLEGNADSAMS 440

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 198801 seqs, 68722935 residues

Total number of hits satisfying chosen parameters: 198801

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Listing first 45 summaries

Database : PIR\_67:\*

1: p1r1:\*

2: p1r2:\*

3: p1r3:\*

4: p1r4:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	243	10.4	461	2 JCA302	tumor necrosis fac
2	218	9.4	454	1 GCMST1	tumor necrosis fac
3	215	9.2	455	1 GCMST1	tumor necrosis fac
4	209	9.0	435	2 I54182	tumor necrosis fac
5	199.5	8.6	314	2 I37383	FAS soluble protei
6	197	8.5	335	2 A40036	apoptosis-mediatin
7	179.5	7.7	327	2 A46484	apoptosis-mediatin
8	173.5	7.5	461	1 GCMST1	tumor necrosis fac
9	172	7.4	461	1 A35356	tumor necrosis fac
10	167.5	7.2	459	2 I48854	gene murine tumour
11	166	7.1	427	1 GCMST1	nerve growth facto
12	163.5	7.0	474	2 B38634	tumor necrosis fac
13	161.5	6.9	416	1 JN0006	nerve growth facto
14	155	6.9	425	1 A25431	nerve growth facto
15	148.5	6.7	425	1 JCA302	Fas antigen precu
16	144	6.2	348	2 T28623	hypothetical prote
17	142	6.1	272	2 I48700	gene o40 protein
18	141	6.1	349	2 D36858	gene G4R protein -
19	140	6.0	349	2 D72175	G2R protein - vari
20	139.5	6.0	595	2 A42086	CD30 antigen precu
21	137	5.9	271	2 S12783	OX40 antigen precu
22	136.5	5.9	277	2 A60771	B-cell activation
23	132	5.7	557	2 A48434	variant-specific s
24	131.5	5.7	577	2 A60501	thrombomodulin pre
25	129.5	5.6	277	2 I37552	OX40 homology - hum
26	128	5.5	326	1 GCMST1	T2 protein myxom
27	128	5.5	2824	2 T22759	hypothetical prote
28	126	5.4	256	2 B33393	T-cell antigen 4-1
29	124.5	5.4	521	2 A29345	steroid hormone re

30	124.5	5.4	932	2 A42632	cell adhesion mole
31	123	5.3	493	2 JCA302	membrane glycoprot
32	122.5	5.3	1372	2 T25933	hypothetical prote
33	119	5.1	1036	2 T17405	scavenger receptor
34	118.5	5.1	305	2 A46476	B cell-associated
35	118.5	5.1	356	2 A25918	thrombomodulin - b
36	116.5	5.0	575	1 THHUB	thrombomodulin pre
37	116	5.0	984	1 A34076	protein-tyrosine k
38	113	4.9	325	2 B43692	T2 protein - rabbi
39	113	4.9	1810	1 A32230	tenascin precursor
40	112	4.8	1436	2 A46496	antigen WCL.1 prec
41	111.5	4.8	667	2 A48579	tirophozoite surfac
42	110.5	4.7	655	1 A46688	hepatocyte growth
43	110.5	4.7	1548	2 S34583	serine proteinase
44	110	4.7	250	1 A49053	CD27 antigen precu
45	109.5	4.7	1766	2 A42125	tirophozoite cystel

## ALIGNMENTS

## RESULT 1

JCA302 tumor necrosis factor receptor p55 precursor - pig

C:Species: Sus scrofa domestica (domestic pig)

C>Date: 29-Nov-1995 #sequence\_revision 08-Feb-1996 #text\_change 23-Jul-1999

C:Accession: JCA302; PC4093

R:Suber, B.; Pauli, U.

Gene 163, 263-266, 1995

A:Title: Cloning of the cDNA encoding the porcine p55 tumor necrosis factor receptor.

A:Reference number: JCA302; MUID:96011645

A:Accession: JCA302

A:Molecule type: mRNA

A:Residues: 1-461 <SVT>

A:Cross-References: GB:U19994; NID:91141752; PIDN:AMC48499.1; PID:91141753

A:Accession: PC4093

A:Molecule type: protein

A:Residues: 1-7 <SV2>

A:Experimental source: kidney cell line 15

C:Genetics:

A:Gene: tnfr

C:Superfamily: tumor necrosis factor receptor type 1; NGF receptor repeat homology

C:Keywords: glycoprotein; kidney; receptor; transmembrane protein; tumor

F:1-29/Domain: signal sequence #status predicted <SIG>

F:30-461/Product: tumor necrosis factor receptor p55 #status predicted <EXT>

F:44-82/Domain: extracellular cysteine rich #status predicted <EXT>

F:84-126/Domain: NGF receptor repeat homology <NGF>

F:211-231/Domain: transmembrane #status predicted <TM>

F:361-447/Domain: signal transduction #status predicted <SIG>

F:54-145/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 10.4%; Score 243; DB 2; Length 461;

Best Local Similarity 24.6%; Pred. No. 7.5e-10;

Matches 119; Conservative 61; Mismatches 185; Indels 118; Gaps 26;

QY	30	PGRRVKTIVLVAAVLLV----	SAESALITQDDLAPOQRAAPQCKRRSSPSE-----	GIC 81
DB	7	PLGLLP-----LVRLALVVVYPAGVGLVHPDRKRESLCPQGVSHPNRSTCTTC	62	
QY	82	PRGHNTSED-----GRDCISCKYGGDYSTHWNDLFCRTRCDG--	GEVLSPTTTR 133	
DB	63	HKCTYIHLNDCIGRGDITDCRECDNG--TFTASENHLTQCISCSCSKREMSQVEISPTVTR	121	
QY	134	NTVQCCEGTFREEDSPEM--CRKCTGCPRGVAVGDCPTPSD-----	175	
DB	122	DTVCGCRKNQYRWSETLFOCLNCSL--CPNGVQL--PCLERKODTICNCHSGFLRDKC	179	
QY	176	IECVH--KESGTHSGAPAVEETVTSPTGTPASPCSLGIIIGVYAAVLLVAVPVCS	234	
DB	180	VSCVNCNKADCKNL--CPATSETRNDPDTGTVLLPLVYIFGLCLAFLLV--	GLACKY 235	

QY 235 LMKKVLPLYKIGCSGG-----GDPERVRS-----SCRGAEDNVLINEIV 276  
 Db 236 QRMK-----PKLYSTICGKSTPVKEGEPLTAKSGPITTFSPIDSPPTTSSPVPSFS 292  
 QY 277 SLIQPTQVP--EDEMEOGEAE-----PTGVNMLSP-----GSEHLLER 314  
 Db 293 PISSPFTPDMSNINVTSPKRIAPPQAGPILPPAPASTVPPTLPKMGSAHSASHS 352  
 QY 315 AEARSQRRLVLANEGDPTETLRQCFDADLVDPDSNEPIMRKLGMDNEI-KVAKA 373  
 Db 353 APAQLA-----DADPA-LLYAVNDG-----VPTTRKKEVRRRLGSEHEIERLELO 397  
 QY 374 EAAGHRDLYTMLIKVKNKGTG-RDASVH-----TLDALETGERL--AKOKIED 420  
 Db 398 NGRCLEAGYSMLAEWRRTSRREATLELLGSLVLRMDLLGLEDIEALRGPARLAPAP 457  
 QY 421 HLL 423  
 Db 458 HLL 460

## RESULT 2

## GOMST1

tumor necrosis factor receptor 1 precursor - mouse  
 M:Alternate names: tumor necrosis factor receptor, 55K  
 C:Species: Mus musculus (house mouse)  
 C:Date: 30-Jun-1992 #sequence, revision 30-Jun-1992 #text, change 01-Dec-2000  
 C:Accession: A38634; EMBL: X59238; PIDN: AAA39751.1; PID: g199826  
 R: Lewis, M.; Tartaglia, L.A.; Lee, A.; Bennett, G.L.; Rice, G.C.; Wong, G.H.W.; Chen, E.  
 Proc. Natl. Acad. Sci. U.S.A. 88, 2830-2834, 1991  
 A:Title: Cloning and expression of cDNAs for two distinct murine tumor necrosis factor  
 A:Reference number: A38634; MUID: 91187885  
 A:Accession: A38634  
 A:Molecule type: mRNA  
 A:Residues: 1-454 <LEW>  
 A:Cross-references: GB: M60468; NID: g199825; PIDN: AAA39751.1; PID: g199826  
 R: Goodwin, R.G.; Anderson, D.; Jerzy, R.; Davis, T.; Brannan, C.I.; Copeland, N.G.; Jenk  
 Mol. Cell. Biol. 11, 3020-3026, 1991  
 A:Title: Molecular cloning and expression of the type 1 and type 2 murine receptors for  
 A:Reference number: A40254; MUID: 91246168  
 A:Accession: A40254  
 A:Molecule type: mRNA  
 A:Residues: 1-454 <GO2>  
 A:Cross-references: GB: M60468; NID: g199825; PIDN: AAA39751.1; PID: g199826  
 R: Barrett, K.; Taylor-Fishwick, D.A.; Cope, A.P.; Kissomergis, A.M.; Gray, P.W.; Feldma  
 Eur. J. Immunol. 21, 1649-1656, 1991  
 A:Title: Cloning, expression and cross-linking analysis of the murine p55 tumor necrosis  
 A:Reference number: S16677; MUID: 91285014  
 A:Accession: S16677  
 A:Molecule type: mRNA  
 A:Residues: 1-454 <BAR>  
 A:Cross-references: EMBL: X59238; NID: g53578; PIDN: CAA41922.1; PID: g53579  
 R: Roche, J.G.; Brockhaus, M.; Gentz, R.; Lesslauer, W.  
 Immunogenetics 34, 338-340, 1991  
 A:Title: Molecular cloning and expression of the mouse Tnf receptor type b.  
 A:Reference number: S19021; MUID: 92039815  
 A:Accession: S19021  
 A:Molecule type: mRNA  
 A:Residues: 1-454 <ROT>  
 A:Cross-references: EMBL: X57796; NID: g54848; PIDN: CAA40936.1; PID: g54849  
 R: Bebo, B.P.  
 Immunogenetics 39, 450-451, 1994  
 A:Title: Nucleotide sequence of the TNF type I receptor from a mouse endothelioma cell  
 A:Reference number: I54532; MUID: 94245292  
 A:Accession: I54532  
 A:Status: translated from GB/EMBL/DBJ  
 A:Molecule type: mRNA  
 A:Residues: 1-454 <RES>  
 A:Cross-references: GB: L26349; NID: g430732; PIDN: AAA59361.1; PID: g430733  
 R: Roche, J.G.; Bluetmann, H.; Gentz, R.; Lesslauer, W.; Stelmetz, M.  
 Mol. Immunol. 30, 165-176, 1993  
 A:Title: Genomic organization and promoter function of the murine tumor necrosis factor  
 A:Reference number: I57826; MUID: 93156721

A:Accession: I57826  
 A:Status: preliminary; translated from GB/EMBL/DBJ  
 A:Molecule type: DNA  
 A:Residues: 1-393, 'G', 395-454 <RE2>  
 A:Cross-references: GB: M76656; NID: g202100; PIDN: AAA40465.1; PID: g202102  
 C:Comment: This protein is one of two distantly related receptors for both TNF-alpha  
 C:Genetics:  
 A:Gene: TNFR-2  
 A:Introns: 13/3; 65/1; 108/1; 158/1; 184/2; 210/1; 248/1; 257/3; 353/1  
 C:Superfamily: tumor necrosis factor receptor type 1; NGF receptor repeat homology  
 C:Keywords: cytokine receptor; duplication; glycoprotein; receptor; transmembrane pro  
 F:1-29/Domain: signal sequence #status predicted <SIG>  
 F:30-454/Product: tumor necrosis factor receptor type 1 #status predicted <MAT>  
 F:30-212/Domain: extracellular #status predicted <EXT>  
 F:44-82/Domain: NGF receptor repeat homology <NG1>  
 F:84-126/Domain: NGF receptor repeat homology <NG2>  
 F:127-167/Domain: NGF receptor repeat homology <NG3>  
 F:168-204/Domain: NGF receptor repeat homology <NG4>  
 F:213-235/Domain: transmembrane #status predicted <MEM>  
 F:236-454/Domain: intracellular #status predicted <INT>  
 F:54,151,202/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 9.4%; Score 218; DB 1; Length 454;  
 Best Local Similarity 22.2%; Pred. No. 4.4e-08;  
 Matches 109; Conservative 51; Mismatches 163; Indels 168; Gaps 22;

QY 32 PVPRTVIVVAVALIVSAESALITQDDIAPQAQAQQRSSSEGLCPRGHHI----- 87  
 Db 4 PVPGLLSTVLLALLMGHPBGV--TGLVPS--LGDREKDS---LCPQGXVSHSN 54  
 QY 88 -----SEGRD--CISCKYGQDYTHNMDDLFCILCTRC--DSGEVE 125  
 Db 55 NSICCTKCHKGYLVSDCPSPRODVTVCRECKG--FTASQVYILNQLSCKTKCKREMSQVE 113  
 QY 126 LSPCTTTRNVYQCCEGTFREEDSEPM-----CRKRTG-----CPRG-M 164  
 Db 114 ISPCQADKDTYCGCKENGFORYLSETHFCVDCSPCFNGVTYIPCKETQNTVCNCHGFEF 173  
 QY 165 VAVGCTQWSDIECVKHSKSGIKHSEARVAVERTYSSSGTSPASCSLSGIIITVAAYV 224  
 Db 174 IRESECVPCS--HCKKNECKMKLCIPPLAVNTNPQDSGTAV---LPLVILLGLCLLS 227  
 QY 225 LIVAFAVCKSLMKVLLPYLKIGCSGGGDPEDVRDRSSQRGAEEDNVLINEIVSLIOTPOV 284  
 Db 228 FFIILMKRYRW-----R-----EYYSITCDPV 253  
 QY 285 PEQMEVQEPAP-----TGVN-----MLSPGESE-----HLEPA 315  
 Db 254 PVKEEKAKGRLTPAPSPAPSPAFSPSTGFPNPLGFTGFSFSPVSSSTPISPIFGPSNMHMPRV 313  
 QY 316 EAERSQRRLVLANEGD-----PTETLNOCEPDFA-----DL 348  
 Db 314 SE-----VPTQAGADPLLYESLCSVPAPTQVQKWDSDNHPQRPDNDALILYAVVDG 365  
 QY 349 VPFDSWEPIMRKLGLMDNEI-KVAKAEAGHRDLYTMLIKVKNKGTGRDASVHTLDLAE 407  
 Db 366 VPPARWKKEFMFGSLSEHIERLEMQNGRCLEADQYSMLAEWRRTTRPHE-----DTLE 419  
 QY 408 TLGERLAKOKI 418  
 Db 420 VVGGLVSKMNL 430

## RESULT 3

## GOMST1

tumor necrosis factor receptor 1 precursor [validated] - human  
 N:Alternate names: p55 tumor necrosis factor receptor; TNF receptor type 1  
 C:Contains: tumor necrosis factor alpha inhibitor; tumor necrosis factor binding prot  
 C:Species: Homo sapiens (hmn)  
 C:Date: 30-Jun-1992 #sequence, revision 30-Jun-1992 #text, change 08-Dec-2000  
 C:Accession: A38208; A34899; A34900; A36555; A38281; S12057; JT0758; A60231;  
 R: Fuchs, P.; Strehn, S.; Dworzak, M.; Hummler, A.; Ambros, P.F.

Genomics 13, 219-224, 1992  
 A:Title: Structure of the human TNF receptor 1 (p60) gene (TNFR1) and localization to ch  
 A:Reference number: A38208; MUID:92250049  
 A:Accession: A38208  
 A:Molecule type: DNA  
 A:Residues: 1-455 <PUC>  
 A:Cross-references: GB:M5864; GB:M75865; GB:M75866; NID:9339748; PIDN:AAA61201.1; PID:9  
 R:Loetscher, H.; Pan, Y.C.E.; Lahn, H.W.; Gentz, R.; Brockhaus, M.; Tabuchi, H.; Lesslauer  
 Cell 61, 361-370, 1990  
 A:Title: Molecular cloning and expression of the human 55 kd tumor necrosis factor recep  
 A:Reference number: A34899; MUID:90235284  
 A:Accession: A34899  
 A:Molecule type: mRNA  
 A:Residues: 1-455 <LOE>  
 A:Cross-references: GB:M58286; GB:M33480; NID:9339753; PIDN:AAA36753.1; PID:9339754  
 A:Experimental source: Placenta  
 A:Note: part of this sequence, including the amino end of the mature protein, confirmed  
 R:Schall, T.J.; Lewis, M.; Koller, K.J.; Lee, A.; Rice, G.C.; Wong, G.H.W.; Gatanaga, T.  
 Cell 61, 361-370, 1990  
 A:Title: Molecular cloning and expression of a receptor for human tumor necrosis factor.  
 A:Reference number: A34900; MUID:90235285  
 A:Accession: A34900  
 A:Molecule type: mRNA  
 A:Residues: 1-455 <SCH>  
 A:Cross-references: GB:M33294; NID:9339744; PIDN:AAA03210.1; PID:9339745  
 R:Himmeler, A.; Maurer-Pegib, I.; Kroenke, M.; Scheurich, P.; Pfefferkorn, K.; Lant, M.;  
 DNA Cell Biol. 9, 705-715, 1990  
 A:Title: Molecular cloning and expression of human and rat tumor necrosis factor recept  
 A:Reference number: A36555; MUID:91090841  
 A:Accession: A36555  
 A:Molecule type: mRNA  
 A:Residues: 1-455 <HIM>  
 A:Cross-references: GB:M63121; NID:9339755; PIDN:AAA36754.1; PID:9339756  
 A:Accession: C36555  
 A:Molecule type: protein  
 A:Residues: 30-38;41-53,'X',55-79,'XX',82-94,'NK','XX',100-104;107-128;162-167,'X',169-2  
 A:Note: the purified protein, called tumor necrosis factor binding protein, is a soluble  
 R:Gray, P.W.; Barrett, K.; Chantry, D.; Turner, M.; Feldmann, M.  
 Proc. Natl. Acad. Sci. U.S.A. 87, 7380-7384, 1990  
 A:Title: Cloning of human tumor necrosis factor (TNF) receptor cDNA and expression of re  
 A:Reference number: A38281; MUID:91017509  
 A:Accession: A38281  
 A:Molecule type: mRNA  
 A:Residues: 1-455 <GRA>  
 A:Cross-references: GB:M37764  
 A:Note: the authors translated the codon TGG for residue 371 as Thr, AAG for residue 372  
 R:Nophar, Y.; Kemper, O.; Brakubusch, C.; Engelmann, H.; Zwang, R.; Aderka, D.; Holtmann  
 EMBO J. 9, 3269-3278, 1990  
 A:Title: Soluble forms of tumor necrosis factor receptors (TNF-Rs). The cDNA for the TNF  
 le form of the receptor.  
 A:Reference number: S12057; MUID:91006021  
 A:Accession: S12057  
 A:Molecule type: mRNA  
 A:Residues: 1-455 <NOP>  
 A:Cross-references: EMBL:X55313; NID:937223; PIDN:CAA39021.1; PID:937224  
 A:Note: parts of soluble TNF binding protein 1, including its amino and carboxyl ends, w  
 R:Kemper, O.; Wallach, D.  
 Gene 134, 209-216, 1993  
 A:Title: Cloning and partial characterization of the promoter for the human p55 tumor ne  
 A:Reference number: J70758; MUID:94085779  
 A:Accession: J70758  
 A:Molecule type: DNA  
 A:Residues: 1-13 <KEM>  
 R:Secklinger, P.; Vey, E.; Turcatti, G.; Wingfield, P.; Dayer, J.M.  
 Eur. J. Immunol. 20, 1167-1174, 1990  
 A:Title: Tumor necrosis factor inhibitor: purification, NH-2-terminal amino acid sequenc  
 A:Reference number: A60231; MUID:90292116  
 A:Accession: A60231  
 A:Molecule type: protein  
 A:Residues: 41-43,'X',45-53,'X',55-57 <SEC>  
 R:Gatanaga, T.; Hwang, C.; Kohr, W.; Cappuccini, F.; Lucet III, J.A.; Jeffes, E.W.B.; Le  
 Proc. Natl. Acad. Sci. U.S.A. 87, 8781-8784, 1990  
 A:Title: Purification and characterization of an inhibitor (soluble tumor necrosis facto

tients.  
 A:Reference number: A38258; MUID:91062364  
 A:Accession: A38258  
 A:Molecule type: protein  
 A:Residues: 41-60 <CAT>  
 A:Experimental source: cancer patient serum  
 R:Olsson, I.; Lant, M.; Nilsson, E.; Peetre, C.; Thysell, H.; Grubb, A.; Adolf, G.  
 Eur. J. Hematol. 42, 270-275, 1989  
 A:Title: Isolation and characterization of a tumor necrosis factor binding protein fr  
 A:Reference number: A60594; MUID:89111156  
 A:Accession: A60594  
 A:Molecule type: protein  
 A:Residues: 41-43,'X',45-53,'V',55-57,'XX',60 <OLS>  
 R:Engelmann, H.; Novick, D.; Wallach, D.  
 J. Biol. Chem. 265, 1531-1536, 1990  
 A:Title: Two tumor necrosis factor-binding proteins purified from human urine. Eviden  
 A:Reference number: A35010; MUID:90110215  
 A:Accession: A35010  
 A:Molecule type: protein  
 A:Residues: 41-45 <ENG>  
 A:Experimental source: normal urine  
 R:Kajihara, J.; Asada, A.; Kihara, S.; Kato, K.  
 Biosci. Biotechnol. Biochem. 58, 2266-2268, 1994  
 A:Title: Amino acid sequence of natural tumor necrosis factor alpha inhibitor purified  
 A:Reference number: J02404; MUID:95128033  
 A:Accession: J02404  
 A:Molecule type: protein  
 A:Residues: 41-53,'X',55-144,'X',146-150,'X',152-186,'X',188-201 <KAJ>  
 A:Experimental source: urine  
 C:Comment: This protein is one of two known receptors for both TNF-alpha (cachectin)  
 C:Genetics:  
 A:Gene: GDB:TNFR1  
 A:Cross-references: GDB:125913; OMIM:191190  
 A:Map position: 12p13.2-12p13.2  
 A:Initons: 13/3; 65/1; 108/1; 158/1; 184/2; 209/1; 247/1; 256/3; 353/1  
 C:Superfamily: tumor necrosis factor receptor type 1; NGF receptor repeat homology  
 C:Keywords: duplication; glycoprotein; receptor; transmembrane protein  
 F:1-21/Domain: signal sequence #status predicted <SIG>  
 F:22-45/Domain: tumor necrosis factor receptor 1 #status predicted <MAT>  
 F:30-211/Domain: extracellular #status predicted <EXT>  
 F:41-201/Product: TNF binding protein 1 (tumor necrosis factor alpha inhibitor) #stat  
 F:44-82/Domain: NGF receptor repeat homology <NG1>  
 F:84-126/Domain: NGF receptor repeat homology <NG2>  
 F:127-167/Domain: NGF receptor repeat homology <NG3>  
 F:168-196/Domain: NGF receptor repeat homology <NG4>  
 F:212-234/Domain: transmembrane #status predicted <MEM>  
 F:235-455/Domain: intracellular #status predicted <INT>  
 F:54,145,151/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 9.2% Score 215; DB 1; Length 455;  
 Best Local Similarity 23.0%; Pred. No. 7.2e-08;  
 Matches 109; Conservative 62; Mismatches 172; Indels 130; Gaps 22;

Qy	34	VPTKLVVAVALVLA	SAESALITQDLPQRAPOQRKSPSEGLCPRGHINSEDR	92
Db	6	VPDLRLPLVLELLV	GVYSGVI---GLVP--HNGDEKRD---VCPQGYIHPPGNS	56
Qy	93	-----	DCISCKYGGDYTHWMDLFLCLTRC--DSGEVELS	127
Db	57	ICCTKCHKGTLYL	NDPCPGQDPTDCRECESG--SEPTASENLRLHCLSCSKCKEKGQVEIS	115
Qy	128	PCGTTTNTVCOCE	GTREDSPEM--CRGCRGCPRGWYKVGDCPTWSDIECVHSGS	184
Db	116	SCVYDRFTVCGC	KRNQYRHYWSENLFCQFPCSL-CLNGTV-----HLSCEKQNTV	165
Qy	185	-TKHGEAPAVEET	VTSSPGTPASPC-----SLSGIIIGVTAVALVLAAPVC	233
Db	166	CTGACGFLFLEN	ECVSNCKKSLCTKTKLDPQENKGTGEDSTVLLPLVIFFGCLL	225
Qy	234	SLV-----	WKVLPYKIGTCSGGGDPER--VDRSSQRPACEDVNLVEIYSILQ	280

Db 226 SLLEFGLMYRYORKSKLYSI--VC--GKSTPEKEGELEGTTRKPLAPNPFSP-----T 276  
 QY 281 PTQVEQEMEOVEPAEPPLGVNMLSPGSEHLEPEAEARSRRLLYLPANG----- 332  
 Db 277 PGFTPTLGFVSVPSTSTSSSTYTPGCPNPAAP-----RREVAAPYOGADPILATA 328  
 QY 333 ---DPTETLRQCFDDFA-----DLVPEDSWPLMRKLGIMNEI-KV 370  
 Db 329 LADPILNPLOKWEDESAHKQSLDTPATLYAVENVPLRKEEFVRRLGLSHEIDRL 388  
 QY 371 AKAEAAHROTLYMLIKWNKT-----GRDASVHTLDALETGERTL 413  
 Db 389 ELONGRCLEAQQSMLATWRRRTPRREATLELLGRVLRDMDLGLDIEAL 441

RESULT 4  
 154182  
 Tumor necrosis factor receptor 2-related protein - human  
 C:Species: Homo sapiens (man)  
 C:Date: 24-May-1996 #sequence\_revision 24-May-1996 #text\_change 17-Mar-2000  
 C:Accession: 154182  
 R:Baens, M.; Chetani, M.; Cassiman, J.J.; Van den Berghe, H.; Marynen, P.  
 Genomics 16, 214-218, 1993  
 A:Title: Construction and evaluation of a hncDNA library of human 12p transcribed sequen  
 A:Reference number: 154182; MUID:93252381  
 A:Accession: 154182  
 A:Status: preliminary; translated from GB/EMBL/DBJ  
 A:Molecule type: mRNA  
 A:Residues: 1-435 <RES>  
 A:Cross-references: GB:L04270; NID:9339761; PIDN:AAA36757.1; PID:9339762  
 C:Genetics:  
 A:Gene: GDB:LTBR  
 A:Cross-references: GDB:1230195; OMIM:600979  
 A:Map position: 12p13.3-12p13.1  
 C:Superfamily: tumor necrosis factor receptor type 1; NGF receptor repeat homology

Query Match 9.0%; Score 209; DB 2; Length 435;  
 Best Local Similarity 24.5%; Pred. No. 1.8e-07;  
 Matches 91; Conservative 39; Mismatches 129; Indels 112; Gaps 18;

QY 20 PGREARGARPGPRVKTLYVAVALLVSASALITQODLAPQOARAPQOKRSSPSE- 78  
 Db 4 PWATSAAPGLAMGP-----LVGLGLLAA-----SQPAVPPYASENQCRCDEKEY 50  
 QY 79 -----GLCPGHHISEDG---RD--CISCKYGQDYSTHNDLFLCRLCTRCDC--SG 122  
 Db 51 YEPQHHCSCRCPPGYVAKCSRIKDYCATCA--ENSTNEHNNTYITQLCPDCDPVNG 109  
 QY 123 EVELSPCTTTRNTVCCCEGTREDESPMKCRKCRGTGCPRGWVKYVDCPTWSDIE----- 177  
 Db 110 LEELIAPCTSKRTYOCRCQGMFCAMALE-CTHCEL-----LSDCPPEAEALKDEV 160  
 QY 178 -----CVKESGTHKSGAPAV-----EEYVTSPTGTPAS-----PCS 210  
 Db 161 GGNHNVCHYCKAGHONSSPSARCOPTHRCENQGLVEAPHTAOSDTCCKNPLELPPE 220  
 QY 211 LSGIIGVTV---AAVLLIVAVFYCKSLMK-----KVLPYKLGICSGGGGDERVD 259  
 Db 221 MGTMLMALVLLPLAFLLLATVFS---IMKSHPSLCKKLSLKRKRGSGRPVY--- 274  
 QY 260 RSSQORGADNVLNLSLQPTQ-----VPQEMEVEPAEPITGV 300  
 Db 275 AGSWEPKRAHPYEPDLYOPLRISGVSFVSTGLPAAPVLEAGVPOQ-----QSPDLITRE 330  
 QY 301 NMLSPGESEHL 311  
 Db 331 PDLPEGEOSQV 341

RESULT 5  
 137383  
 FAS soluble protein - human

C:Species: Homo sapiens (man)  
 C:Date: 02-Jul-1996 #sequence\_revision 02-Jul-1996 #text\_change 21-Jul-2000  
 C:Accession: 137383  
 R:Gaschino, I.; Ficuci, G.; Papoff, G.; Ruberti, G.  
 J. Immunol. 154, 2706-2713, 1995  
 A:Title: Three functional soluble forms of the human apoptosis-inducing Fas molecule  
 A:Reference number: 137383; MUID:95181785  
 A:Accession: 137383  
 A:Status: preliminary; translated from GB/EMBL/DBJ  
 A:Molecule type: mRNA  
 A:Residues: 1-314 <RES>  
 A:Cross-references: EMBL:247993; NID:9728578; PIDN:CAA8031.1; PID:9695539

Query Match 8.6%; Score 199.5; DB 2; Length 314;  
 Best Local Similarity 27.7%; Pred. No. 5.9e-07;  
 Matches 74; Conservative 36; Mismatches 96; Indels 61; Gaps 13;

QY 38 LVLVVAVILL-----VSAESALITQODLAPQOARAPQOKRSSPSEGL-----CPP 83  
 Db 8 LPLVLTIVARLSKSYNAQVTDINSKGL--ELRKYTVTETONLEGLHHGQFCRKP 65  
 QY 84 GHH-----ISEDRDCISCKYQDYSTHNDLFLCRLCTRCDSG---EVELSPCTTRN 134  
 Db 66 GERKARDCTVNGDEPDPCVQEGKEVTDKHAHSSCRRCRLCDEHGLEVEIN-CTRTON 124  
 QY 135 TYQCEEGTFREDESPMKCRKCRGTGCPRGWVKYVDCPTWSDIECVH-----KESGTRK 187  
 Db 125 TKCRCKPNFCNSYVCEHDDPC-TRCEHGIIR--ECTILSNTKCEYKREVKOTCRKH 181  
 QY 188 SEAPAVEETVTSPTGTPA---SPCSLGIIGVVAVALLVAVFYCKSLMKRVLLPYL 244  
 Db 182 RENGSHSPPLNFTVAINLSDVLSKYI--TTIAGV-----TLSQV 224  
 QY 245 KCICSGGGDPERVDRSSORPGAEDNV 271  
 Db 225 KGFVRKNGVNEAKIDEIK-----NDNV 246

RESULT 6  
 A40036  
 apoptosis-mediating surface antigen Fas precursor - human  
 N:Alternate names: surface antigen APO-1  
 C:Species: Homo sapiens (man)  
 C:Date: 17-Jan-1992 #sequence\_revision 17-Jan-1992 #text\_change 21-Jul-2000  
 C:Accession: A40036; S24543; A38142  
 R:Ittoh, N.; Yonehara, S.; Ishii, A.; Yonehara, M.; Mizushima, S.I.; Sameshima, M.; Ha  
 Cell 66, 233-243, 1991  
 A:Title: The polypeptide encoded by the cDNA for human cell surface antigen Fas can m  
 A:Reference number: A40036; MUID:91309137  
 A:Accession: A40036  
 A:Status: preliminary  
 A:Molecule type: mRNA  
 A:Residues: 1-335 <ITD>  
 A:Cross-references: GB:M67454; NID:9182409; PIDN:AAA63174.1; PID:9182410  
 R:Krammer, P.H.  
 submitted to the EMBL Data Library, February 1992  
 A:Reference number: S24543  
 A:Accession: S24543  
 A:Status: preliminary  
 A:Molecule type: mRNA  
 A:Residues: 1-335 <KRA>  
 A:Cross-references: EMBL:X63717; NID:928741; PID:928742  
 R:Oehm, A.; Behrmann, I.; Palk, W.; Pawlita, M.; Maier, G.; Klas, C.; Li-Weber, M.; R  
 J. Biol. Chem. 267, 10709-10715, 1992  
 A:Title: Purification and molecular cloning of the APO-1 cell surface antigen, a memb  
 A:Reference number: A38142; MUID:92268122  
 A:Accession: A38142  
 A:Status: preliminary; not compared with conceptual translation  
 A:Molecule type: nucleic acid  
 A:Residues: 1-134, 'Q', 136-335 <OEH>  
 A:Experimental source: SKW6.4 cells  
 A>Note: sequence extracted from NCBI backbone (NCBI:103810)

A>Note: In NCBI backbone the source is designated as mouse  
 C:Genetics:  
 A:Gene: GDB:AP11  
 A:Cross-references: GDB:132671; OMIM:134637  
 A:Map position: 10q24.1-10q24.1  
 C:Superfamily: NGF receptor repeat homology  
 C:Keywords: apoptosis; surface antigen; transmembrane protein  
 F:1-16/Domain: signal sequence #status predicted <SIG>  
 F:85-128/Domain: signal sequence #status predicted <SIG>  
 F:174-190/Domain: transmembrane #status predicted <TM>

Query Match 8.5%; Score 197; DB 2; Length 335;  
 Best Local Similarity 26.6%; Pred. No. 9, 6e-07;  
 Matches 77; Conservative 34; Mismatches 93; Indels 86; Gaps 14;

QY 38 LVLYVAALLV---VSASALITQODLAPQORAAPQKRSSPEGL-----CPP 83  
 DB 8 LPLVLTSLVRLSKSVNAQVTDINSKGL--ELKRTVTVEYTONLEGLHHDGQFCRKP 65  
 QY 84 GHH-----ISEDRDCISCKYQADYSTMNDLLFCLRCTRCDSG--EVELSPCTTTN 134  
 DB 66 GEKKAADCVNDEPDCVCEQCEKETTDKANHSSKRCRCLDEGLEVEYN-CTRTON 124  
 QY 135 TVQCEEGTFREEDSPDMCRKCRGCGPMVAVGDCPTWSDIECVHESGT----- 185  
 DB 125 TKCRCKPFCNFTVCNEHCDPC-TKCEHGIK--ECTLTSNFTKC--KEGSRNGLMCL 179  
 QY 186 -----KHSGEPAVEETVTSPTGPA---SPCSLSGIIIVYA 221  
 DB 180 LLLPLIYVWKRREYQKTRKHKRKNQSHSPETLNPFTVAINLSVDVLSKYI--TTIA 237  
 QY 222 AVVLIYAVFCKSLMKVKVLPYLKIGICSGGDPDERVDRSSORPAGEDN 271  
 DB 238 GVM-----TLQVKGKGFVRKNGVNAKIDEIK-----NDNV 267

RESULT 7  
 A46484  
 Apoptosis-mediating membrane-associated polypeptide Fas - mouse  
 C:Species: Mus musculus (house mouse)  
 C:Date: 18-Jun-1993 #sequence\_revision 18-Nov-1994 #text\_change 05-Nov-1999  
 C:Accession: A46484; A47254  
 R:Watanabe-Fukunaga, R.; Brannan, C.I.; Itoh, N.; Yonehara, S.; Copeland, N.G.; Jenkins, J. Immunol. 148, 1274-1279, 1992  
 A:Title: The CDNA structure, expression, and chromosomal assignment of the mouse Fas ant  
 A:Reference number: A46484; MUID:92148151  
 A:Accession: A46484  
 A:Status: preliminary  
 A:Molecule type: mRNA  
 A:Residues: 1-337 <MAT>  
 A:Cross-references: GB:M63649; NID:9193225; PIDN:AAA37593.1; PID:9193226  
 A:Experimental source: BAW3 macrophage cell line  
 A:Note: sequence extracted from NCBI backbone (NCBIN:81544, NCBIP:81545)  
 R:Adachi, M.; Watanabe-Fukunaga, R.; Nagata, S.  
 Proc. Natl. Acad. Sci. U.S.A. 90, 1756-1761, 1993  
 A:Title: Aberrant transcription caused by the insertion of an early transposable element  
 A:Reference number: A47254; MUID:93189576  
 A:Accession: A47254  
 A:Status: preliminary  
 A:Molecule type: nucleic acid  
 A:Residues: 1-96 <ADA>  
 A:Cross-references: GB:S56490; NID:9298505; PIDN:AAB25700.1; PID:9298506  
 A:Experimental source: MRL lpr/lpr  
 A:Note: sequence extracted from NCBI backbone (NCBIN:126850, NCBIN:126853, NCBIN:126863,  
 C:Superfamily: NGF receptor repeat homology  
 C:Keywords: transmembrane protein  
 F:44-79/Domain: NGF receptor repeat homology <NGF>  
 F:81-124/Domain: NGF receptor repeat homology <NGF>

Query Match 7.7%; Score 179.5; DB 2; Length 327;  
 Best Local Similarity 24.4%; Pred. No. 1, 6e-05;

Matches 87; Conservative 49; Mismatches 125; Indels 95; Gaps 20;

QY 38 LVLYVAALLVVSASALITQODLAPQORAAPQKRSSPEGL-----CPGHHI 87  
 DB 8 LPLVLTSLVRLSKSVNAQVTDINSKGL--ELKRTVTVEYTONLEGLHHDGQFCRKP 65  
 QY 88 SEDGR-----DCISKYQADY--STMNDLLFCLRCTRCDSG--EVELSPCTTTN 136  
 DB 66 VEDCKKNGGTPCAPCTECKEYMDKNHYADK--CRCTICLDEHGLEVEYN-CTLTQNTK 122  
 QY 137 CQCEEGTFREEDSPDMCRKCRGCGPMVAVGDCPTWSDIECVHESGT----- 196  
 DB 123 CCKRPFYCDSPCEHCVRB--ASCEHGLE--PCVATSNVNC-RKQS----- 165  
 QY 197 TTTSSPTSPASPCSLGIIIGTVAAVAVLIYAVFC-----KSLMKVLPYLKIGICSGG 252  
 DB 166 -----PRNRLMLTIL-----VLIPLVFIYTRKTRKRCMKR-----RQ 199  
 QY 253 GPERVDRSSORPAGEDNVLNLSIAPTOYPE--QEMVEQPAEPTGVNMLSPGESR 310  
 DB 200 DPPE--SRTSSRETIPMANSNLSL--KYPRIADMTIQAKKFARENNIKCKIDE 253  
 QY 311 LLEPAEERSQRR-RLV-----PANCDPTETL-----RQCDPDAADVFPD 352  
 DB 254 IMHDSIQDTAEQKQVLLCQYSHGKSDAYODLIRKLRKAEKCRRLDKPQDVQKD 309

RESULT 8  
 GORTT1  
 tumor necrosis factor receptor 1 precursor - rat  
 N:Contains: tumor necrosis factor binding protein 1 (TNF blocking factor)  
 C:Species: Rattus norvegicus (Norway rat)  
 C:Date: 30-Jun-1992 #sequence\_revision 07-Oct-1994 #text\_change 22-Jun-1999  
 C:Accession: B36555  
 R:Himmler, A.; Maurer-Fogy, I.; Kroenke, M.; Scheurich, P.; Pfizenmaier, K.; Lantz, M  
 DNA Cell Biol. 9, 705-715, 1990  
 A:Title: Molecular cloning and expression of human and rat tumor necrosis factor rece  
 A:Reference number: A36555; MUID:91090841  
 A:Accession: B36555  
 A:Molecule type: mRNA  
 A:Residues: 1-461 <HN>  
 A:Cross-references: GB:M63122; NID:9207361; PIDN:AAA42256.1; PID:9207362  
 C:Comment: This protein is one of two known receptors for both TNF- $\alpha$  (cachectin)  
 C:Superfamily: tumor necrosis factor receptor type 1; NGF receptor repeat homology  
 C:Keywords: duplication; glycoprotein; receptor; transmembrane protein  
 F:1-22/Domain: signal sequence #status predicted <SIG>  
 F:30-461/Product: tumor necrosis factor receptor type 1 #status predicted <MAT>  
 F:30-211/Domain: extracellular #status predicted <EXT>  
 F:30-201/Product: tumor necrosis factor binding protein #status predicted <TRP>  
 F:44-82/Domain: NGF receptor repeat homology <NGF>  
 F:84-126/Domain: NGF receptor repeat homology <NGF>  
 F:127-167/Domain: NGF receptor repeat homology <NGF>  
 F:168-204/Domain: NGF receptor repeat homology <NGF>  
 F:212-234/Domain: transmembrane #status predicted <MEM>  
 F:235-461/Domain: intracellular #status predicted <INT>  
 F:54,151,201/Binding site: carbohydrate (asn) (covalent) #status predicted

Query Match 7.5%; Score 173.5; DB 1; Length 461;  
 Best Local Similarity 21.4%; Pred. No. 6, 4e-05;  
 Matches 107; Conservative 53; Mismatches 168; Indels 171; Gaps 25;

QY 32 PVPRKVLVVAALLV---VSASALITQODLAPQORAAPQKRSSPEGL-----LCP 82  
 DB 4 PLVPLGLSLVLTALLMGLHPSGVGLVPSLDREKRNLCQGRKVAHPKNNNSICCTKCH 63  
 QY 83 PGHHISD-----GRD--CISCKYQADYSTMNDLLFCLRCTRC--DSGEVLSPTTTN 134  
 DB 64 KGTLYVSDPSPGQELVEYCDKG-TFTASQNHVRCGLSCCKRKMFPVELSPCKADMD 122  
 QY 135 TVQCEEGTFRE--EDSPDMCRKCRGCGPMVAVGDCPTWSDIECVHESGT-----GDC 172  
 DB 123 TVGCKKNOFORVLTSETHQVDC--SPCFNGTVITPCKEKONTVCNCHAGFLSGNECTP 181









QY 398 SVHTLDALETGRLAKOKIEDHLISGKEMYLEGNADS 437  
 DB 382 KETATIDALLVALRKIORGDIAESL-----YSESTATS 414

## RESULT 14

A26431  
 nerve growth factor receptor precursor, low affinity - rat

N:Alternate names: NGF receptor

C:Species: Rattus norvegicus (Norway rat)

C>Date: 10-Sep-1999 #sequence\_revision 10-Sep-1999 #text\_change 10-Sep-1999

C:Accession: A26431; PH1229

R:Adake, M.J.; Misko, T.P.; Hsu, C.; Herzenberg, L.A.; Shooter, E.M.

Nature 355, 593-597, 1987

A:Title: Gene transfer and molecular cloning of the rat nerve growth factor receptor.

A:Reference number: A26431; MUID:87115859

A:Accession: A26431

A:Molecule type: mRNA

A:Residues: 1-425 <RAD>

A:Cross-references: GB:X05137; NID:956755; PIDN:CAA28783.1; PID:956756

R:Metz, M.; Timmusk, T.; Allikmets, R.; Saarma, M.; Persson, H.

Gene 121, 247-254, 1992

A:Title: Regulatory elements and transcriptional regulation by testosterone and retinoid

A:Reference number: PH1229; MUID:93077038

A:Accession: PH1229

A:Molecule type: DNA

A:Residues: 1-20 <MET>

A:Cross-references: GB:X61269

C:Comment: This receptor is found on sensory and sympathetic neurons, on neuroblastoma

C:Comment: The cysteine-rich region of the extracellular domain may form part or all of

C:Comment: This protein is thought to form a high-affinity receptor when it associates w

C:Genetics:

A:Introns: 20/3

C:Superfamily: nerve growth factor receptor; NGF receptor repeat homology

C:Keywords: duplication; glycoprotein; heterodimer; monomer; phosphoprotein; receptor;

F:1-23/Domain: signal sequence #status predicted <SIG>

F:30-425/Product: nerve growth factor receptor #status predicted <MAT>

F:30-251/Domain: extracellular #status predicted <EXT>

F:33-66/Domain: NGF receptor repeat homology <NG3>

F:68-109/Domain: NGF receptor repeat homology <NG2>

F:110-148/Domain: NGF receptor repeat homology <NG3>

F:150-190/Domain: NGF receptor repeat homology <NG4>

F:198-249/Region: serine/threonine-rich

F:252-273/Domain: transmembrane #status predicted <MEM>

F:274-425/Domain: intracellular #status predicted <INT>

F:61/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 6.7%; Score 155; DB 1; Length 425;

Best Local Similarity 23.2%; Pred. No. 0.0012;

Matches 89; Conservative 45; Mismatches 161; Indels 88; Gaps 17;

QY 71 QKRSSSEGLCPRHGISDGRICCKYG--QDYTHNDLFLCRTRCDSGEVELSP 128  
 DB 94 QSNAP-----C-----VEADDAVC-RCAGGYODEETG-----HCACSCVEGSLVTS 138  
 QY 129 CTTTRATVC-OCEGTFREE-DSPEWCRKCRTPCGPMGVKGDCTPMSDIECVHKESGTR 186  
 DB 133 CQDKQNTVCECEEGYSDEANHVDPCLPC-IYCEPTEFQOLRECTPWADAC--EETPRR 195  
 QY 187 HSGEAPAVEETVTSPTGPASPCSLGIIIGTVAAVLIIVAVFCKSLMKVLPYLKG 246  
 DB 196 WIPRSTPPGSDSTASTOEPVPEQDLVPTVADMVTTVM----- 237  
 QY 247 ICGGGGDEPRDRSSQRCAGEDNVNLEIVSIQPTQV-----EQEMEVQEPAE 296  
 DB 238 -----GSSQPVYTR-----GTDNLLPVYCSILAAVVGIVAVIAKRNNSCKONQGAN 287  
 QY 297 PTGVNMLSPGESEHL-----LEPAEARSQRRLLVPANEGDPT-----ETLRQC 341  
 DB 288 SRVYVNGTPPEEGKSLSDSGISVDSQSLHDQCHTHTOTASGQALKGQGNLXSLPLTKR-- 345  
 QY 342 FDDFADLVPPDSWEPLMRKLGIMNDIEIKVAKAEAGHRDTLYTMLIKWVKTGRDASVHT 401

DB 346 -EEVEKILNGDTRHLAGELGYQPEHIDSEFTHEACPVR-----ALLASW-----GAQDSA 394  
 QY 402 LDPALETGRLAKOKIEDHLIS 424  
 DB 395 TLDALLAALRIQRIADIVESLCS 417

## RESULT 15

JC2395  
 Fas antigen precursor - rat

C:Species: Rattus norvegicus (Norway rat)

C>Date: 20-Feb-1995 #sequence\_revision 20-Feb-1995 #text\_change 05-Nov-1999

C:Accession: JC2395; PC2246

R:Kimura, K.; Wakatsuki, T.; Yamamoto, M.

Biochem. Biophys. Res. Commun. 198, 666-674, 1994

A:Title: A variant mRNA species encoding a truncated form of Fas antigen in the rat 1

A:Reference number: JC2395; MUID:94128114

A:Accession: JC2395

A:Molecule type: mRNA

A:Residues: 1-324 <KIM>

A:Cross-references: DDBJ:D26113; NID:9468486; PIDN:BA05108.1; PID:di1005650; PID:9468

A:Experimental source: thymus

A:Accession: PC2246

A:Molecule type: mRNA

A:Residues: 1-62, 'RFT' <KI2>

A:Cross-references: DDBJ:D26113; NID:9468488; PIDN:BA05109.1; PID:di1005651; PID:9468

A:Experimental source: liver

C:Genetics:

A:Introns: 62/1

C:Superfamily: NGF receptor repeat homology

C:Keywords: transmembrane protein

F:1-21/Domain: signal sequence #status predicted <SIG>

F:22-324/Product: Fas antigen #status predicted <MAT>

F:44-79/Domain: NGF receptor repeat homology <NGF>

F:81-124/Domain: NGF receptor repeat homology <NG4>

F:171-188/Domain: transmembrane #status predicted <TMM>

Query Match 6.4%; Score 148.5; DB 2; Length 324;

Best Local Similarity 25.5%; Pred. No. 0.0025;

Matches 67; Conservative 33; Mismatches 84; Indels 79; Gaps 14;

QY 39 VLVVAVLLVSAESALITQODLAPQOARAPQOKRS-----SPSEGL-----CP 82  
 DB 1 MLMIMAVLPLVLAGPELVNRMQGTDSIFEGLEKRSVRETDNNCSGLYQVGFCCQPCQ 60  
 QY 83 PGHHSIED-----GRDCISCKYGQDYS--THMNDLFLCRTRCDSG--EVELSPCTT 131  
 DB 61 PGERKVKDCDTTSGAPCTCHPCTEGEYTRKHYSDK--CRRCACFCEGGLLEVETN-CTR 117  
 QY 132 TRNTVQCEGTFREDDSPDWCRKCRTPCGPMGVKGDCTPMSDIECVHKESGTRHSGE 190  
 DB 118 TQNTKCRCKENFYCNALCDHCHC-TSC--GLEDLLEPCTRTSNCKCKQSSNFK----- 170  
 QY 191 APAVEETVTSPTGPASPCSLGIIIGTVAAVLIIVAVFCKSLMKVLPYLKICSG 250  
 DB 171 -----LMLLILPGLALPLFYFIYKR--YRKRQ----- 196  
 QY 251 GGGDEPRVDRSSQRCAGEDNVN 273  
 DB 197 --GDPE-----SGIPSPESVPMN 212

Search completed: May 23, 2001, 14:19:46  
 Job time: 91 sec

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